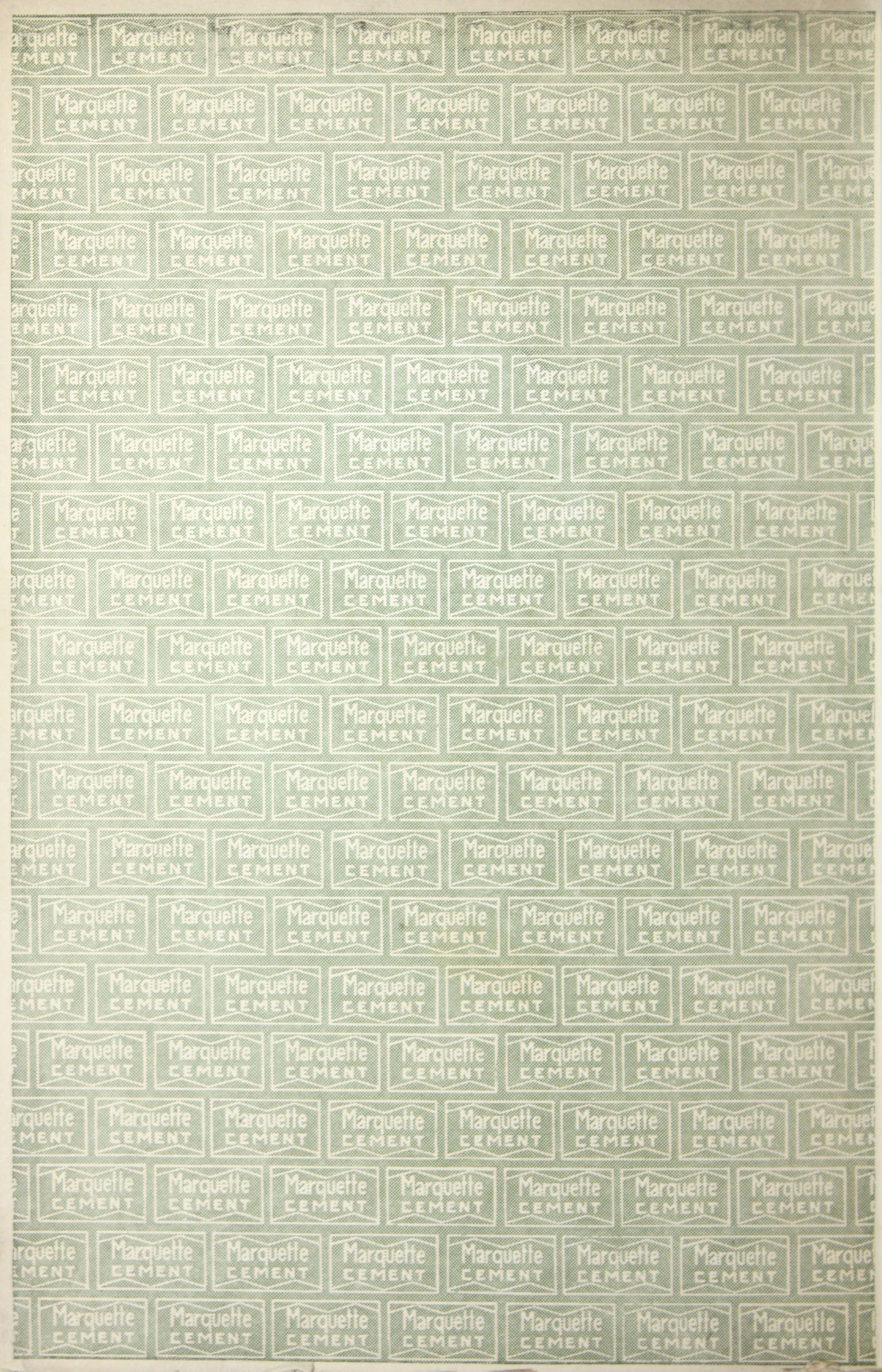


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ONE HUNDRED YEARS—

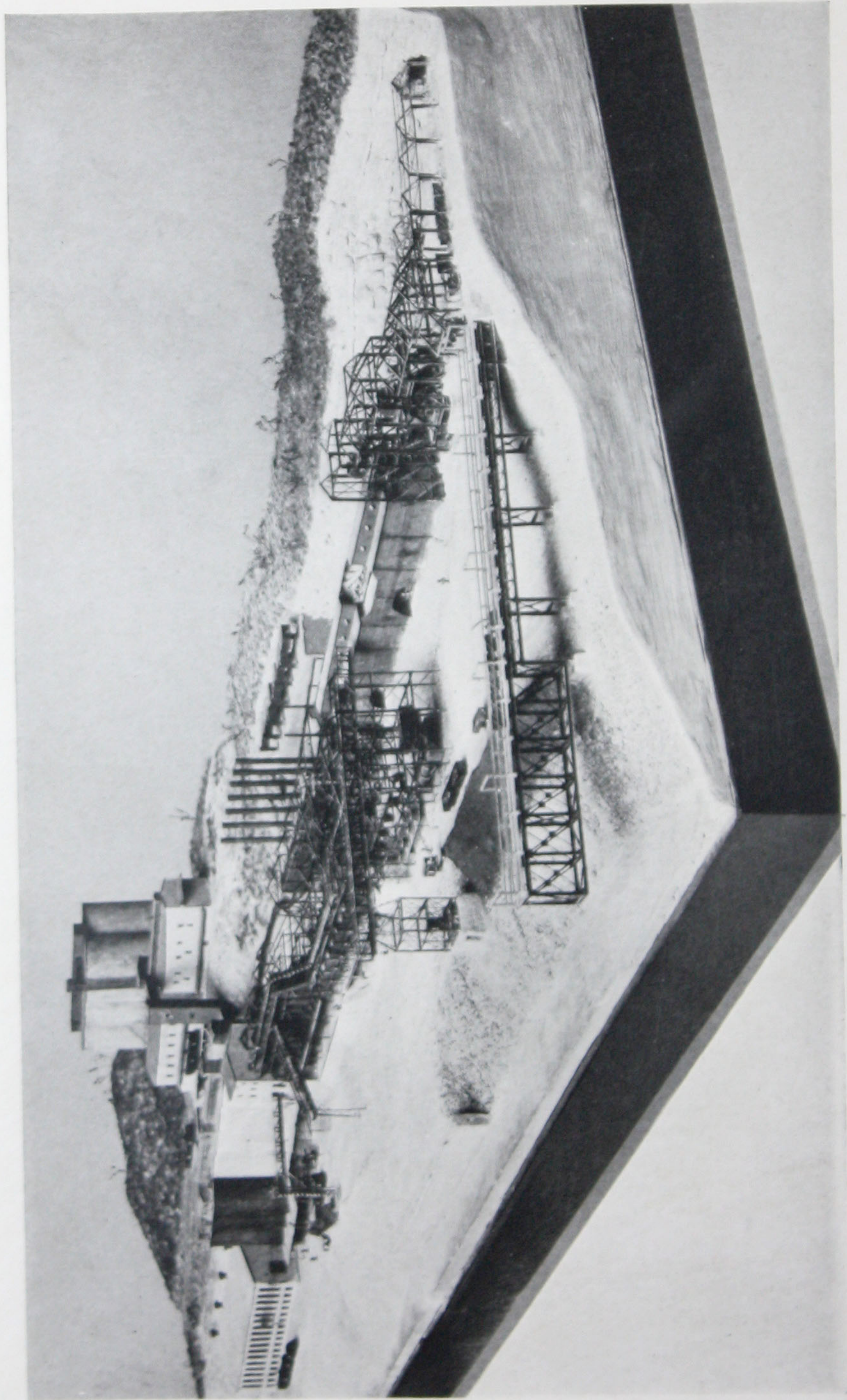
COMMEMORATING
THE CENTENNIAL
OF PORTLAND CEMENT
AND THE
TWENTY FIFTH YEAR
OF MARQUETTE

by

Bertrand C Wheeler



Copyright 1924 Marquette Cement Manufacturing Co.



Twelve-foot model of the La Salle Plant of the Marquette Cement Manufacturing Company as exhibited at the Field Museum, Chicago
(Buildings are not enclosed in order to show the processes of manufacture)

A CENTURY

One hundred years ago Joseph Aspdin discovered a product, the development of which has added over \$12,000,000,000 to the wealth of the United States in the past twenty-five years.

It was at Leeds, England, in May, 1824, that the mason, Aspdin, found, after various experiments in burning lime, that the "clinker," up till then discarded, contained elements which when ground and mixed with water formed a cement harder than the natural cements in use at that time. Then by applying more heat to a predetermined mixture he discovered and patented the material, which he called Portland Cement, so named because of its resemblance when hardened to the building stone then in use, which came from the Isle of Portland, off the southern coast of England.

This gave birth to the portland cement industry, an industry in which today in the United States more than \$300,000,000 is invested, and brought back to civilization in an improved form the ancient art of the Romans, who twenty centuries earlier had used a natural cement in the building of

their aqueducts, bridges and roads, some of which even today stand as mute evidence of the skill of this earlier civilization.

A HALF CENTURY

Even in its cruder stages the manufacture of portland cement required comparatively intricate processes and costly machinery, so that for years natural cements and slack-lime continued to be used. However, both in England and on the Continent, the superior qualities of portland cement, combined with other aggregates to form concrete, gradually received recognition, and the manufacture of portland cement abroad developed rapidly from about 1850. In 1873, 200 years after the coming of Pere Marquette and Louis Joliet, the first imported portland cement arrived in Chicago to compete with the natural cements being used in this country.

This first shipment of 380 barrels came from Montreal on the Merchants Line, and the ship's manifest showed it as "cargo." It was an English cement and an unknown product, so remained a drug on the market until the late John V. Farwell, who had recently returned from England and had



*Modern Chicago, 251
years after Pere Mar-
quette's first visit*



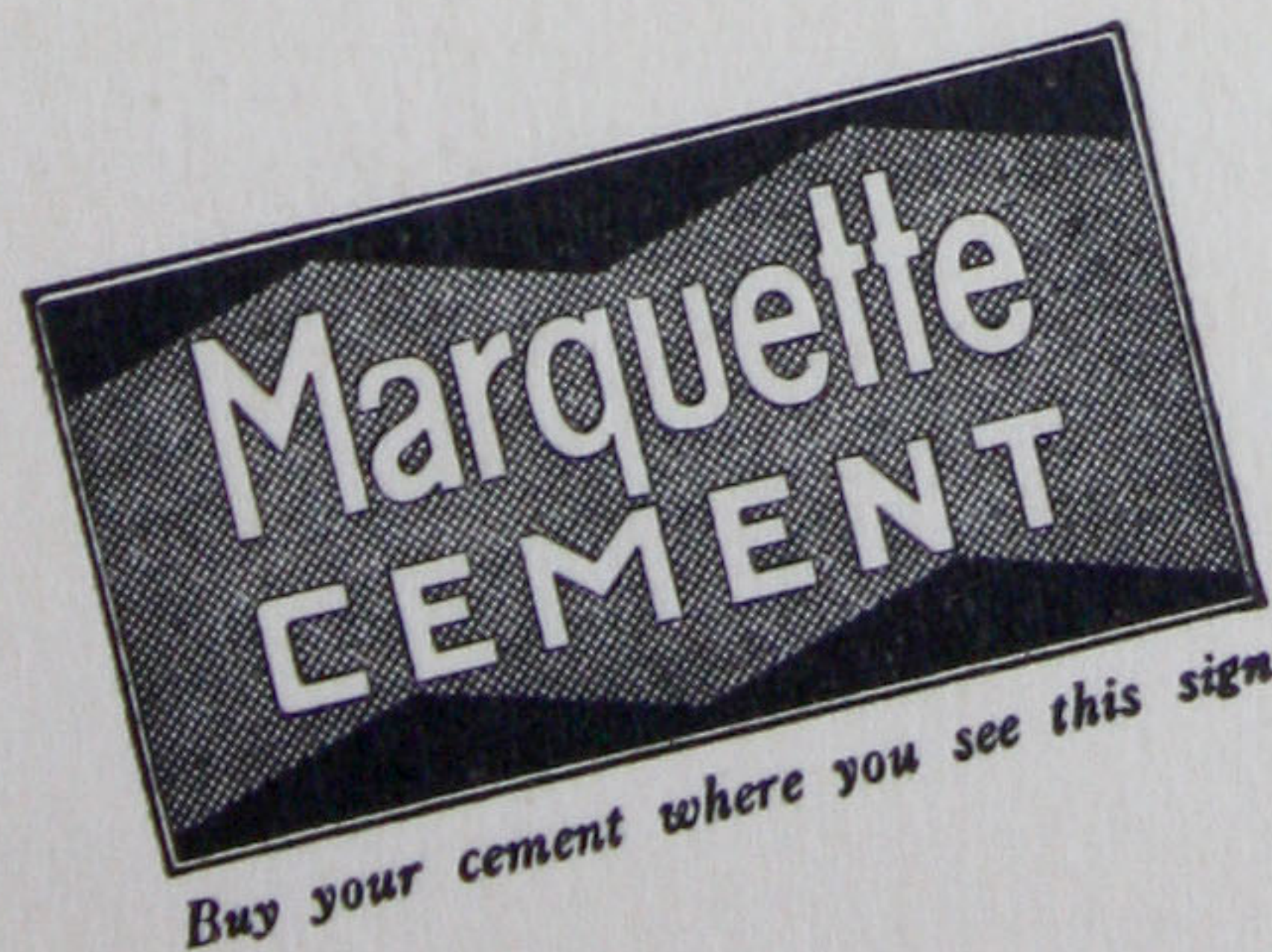
*Pere Marquette bringing his message to the
Indians of the Mississippi Valley, 1673*

PERE MARQUETTE—gentle, fearless, self-sacrificing—
zest of the explorer always overshadowed by zeal of the
missionary—he was one of the few trail-blazers of history who
was not governed by any thought of financial gain or glory

People of the Mississippi Valley will always cherish the memory
of “le bon Pere” and his companion, Louis Joliet, for they
were the first Frenchmen to explore the Great River (1673)
and the first to visit the spot where Chicago now stands.

It is not without a feeling of pride that we record the achieve-
ments of our illustrious namesake. With such traditions to in-
spire us, we would be unworthy of his name if we did not serve
always to the limit of our ability.

Marquette Cement Manufacturing Company, Marquette Building, Chicago
Plants at La Salle, Illinois—Cape Girardeau, Missouri



Buy your cement where you see this sign



Concrete House built over 50 years ago
on the John V. Farwell Estate, Lake Forest, Ill.
Above—House of cement stucco built at
the same time at Lake Forest, Ill.

seen concrete work as undertaken there, heard of it and immediately purchased the shipment.

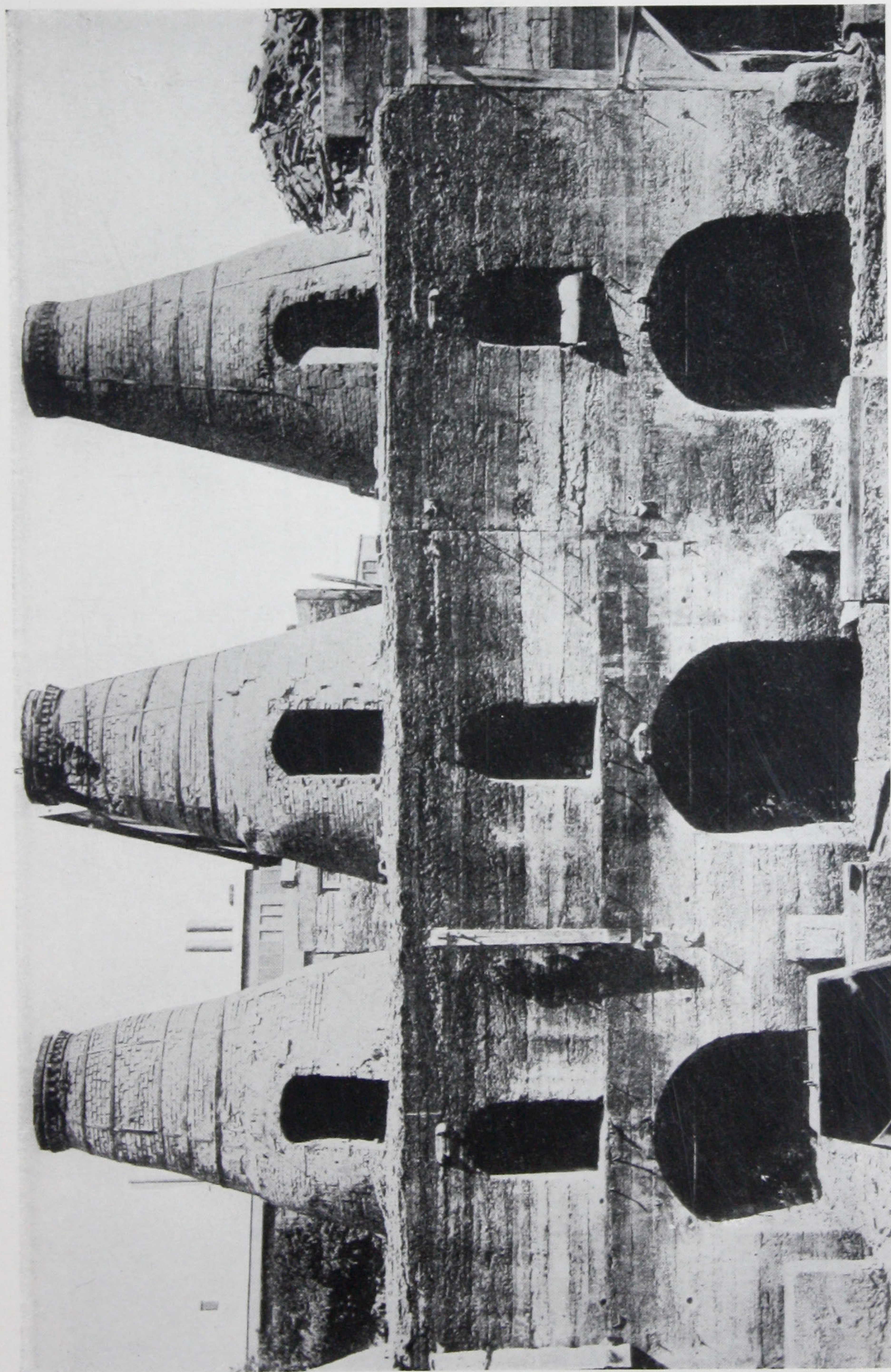
On the John V. Farwell Estate at Lake Forest, Illinois, there stands today a solid concrete three-story house, built in the early seventies, which is probably the first concrete residence constructed in this country, certainly the first in the middle-west. This house was built by Leonard Double, a cement worker, whom Mr. Farwell brought over from England for this purpose.

At about the same time Mr. Double built for himself a small frame house of cement stucco on wooden lath, on the southwest corner of Spruce and Elm Tree Roads, Lake Forest, undoubtedly the first use of cement stucco. This house was recently purchased by Milo Winter, a Chicago artist. Both of these residences have been occupied for the major part of fifty years. The concrete of the Farwell house was marked off with "V" shaped grooves to imitate building stone, and both houses have been painted, but the concrete and the stucco are apparently in as good condition today as when they were built.

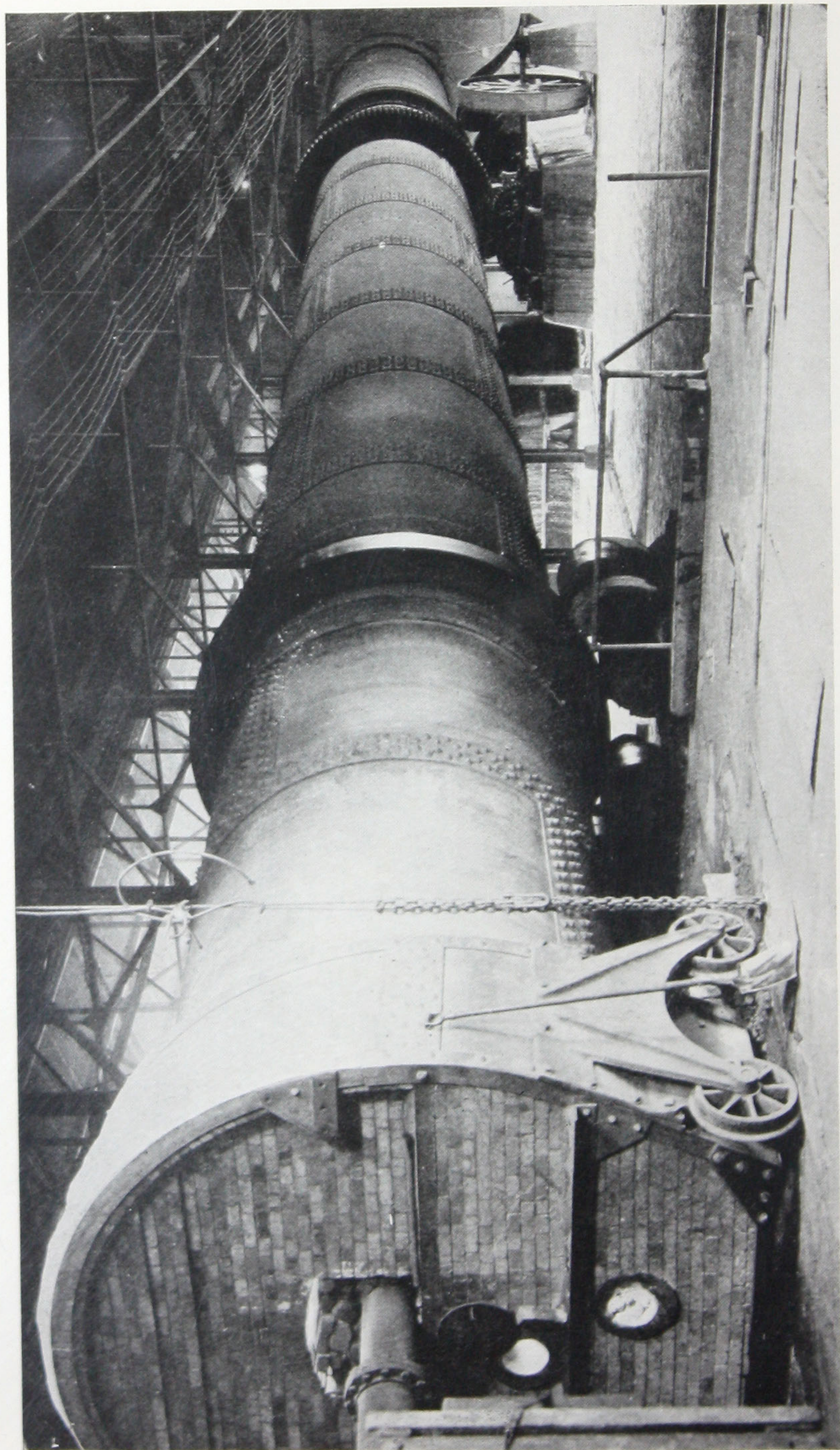
There is little doubt but that some of the first imported portland cement to reach Chicago went into the construction of these and other buildings on the Farwell Estate, as A. L. Farwell, of Chicago, recalls that his father expressed a marked preferment for portland cement over the natural cement then available.

In the fall of the following year, 1874, the first imported portland cement was shipped west of Chicago to John Allen, of Rockford, Illinois, and it is told that this first shipment of 10 barrels was bought for sidewalk construction with the stipulation that it would be paid for in the spring if the sidewalk successfully survived the winter.

Mr. Allen was also an Englishman and continued to use imported portland cement for building blocks, precast sills and lintels, and for concrete slabs for floor and sidewalk construction. Some of this earliest cement in Rockford was used in the construction of the sidewalk in front of the Holland House, where the Stewart Building now stands. The hotel was burned down in a very hot fire, but no impression was made on the sidewalk.



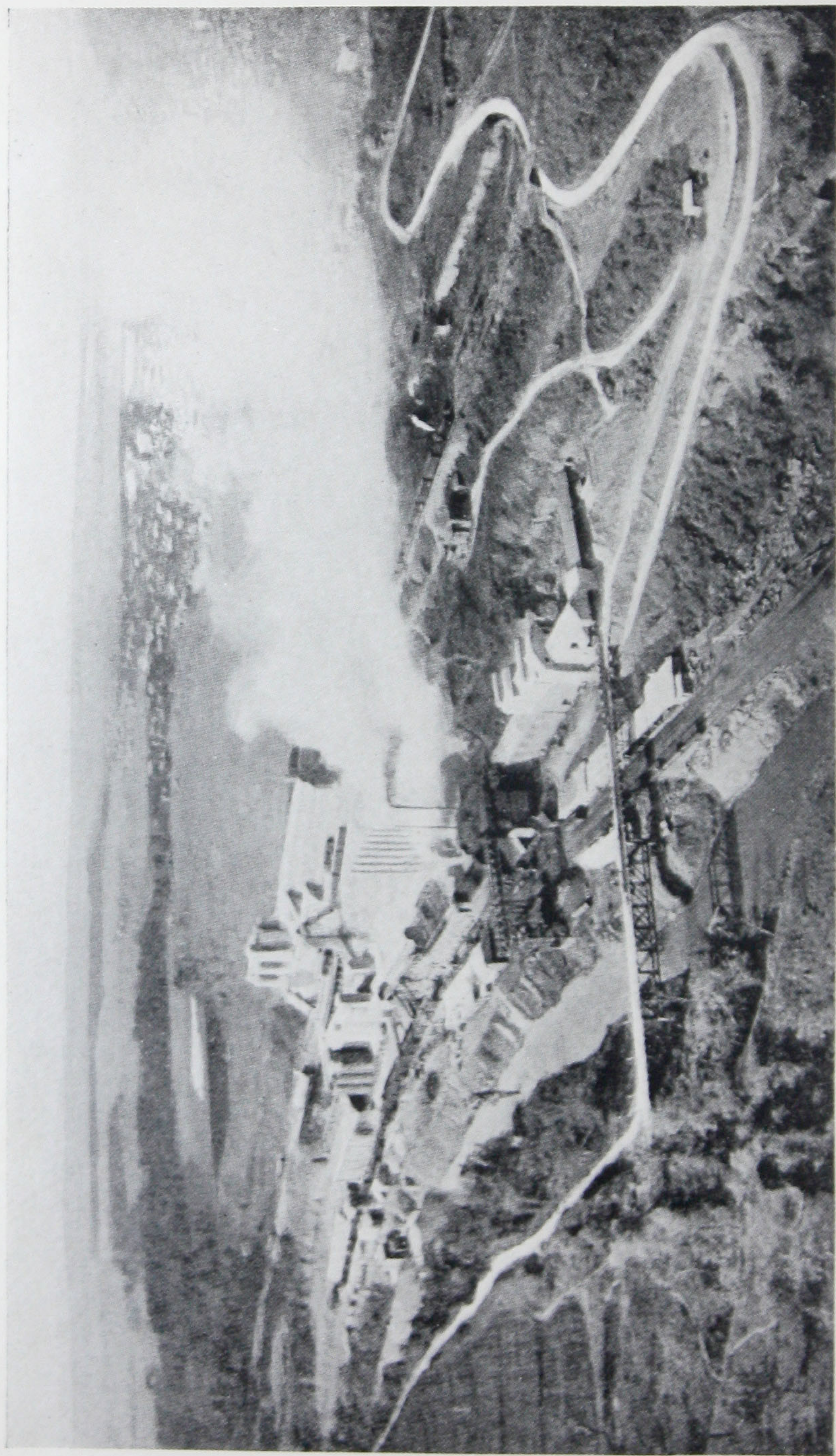
First portland cement mill built in America at Coplay, Pa., in 1872, showing vertical type of kilns



A modern horizontal revolving kiln 8 to 12 ft. in diameter, 150 to 200 ft. long, where the raw material is burned at a temperature of 2700° to 3000° F.

Portland cement from England continued to be imported to the Mississippi Valley for a number of years and William Dickinson, now Vice-President of the Marquette Cement Manufacturing Company, who handled the original shipment to Chicago, alone built up a business in English cement which in fifteen years amounted to shipments of over 300,000 barrels per year. This English portland cement was ground so that 50% would pass thru a 100-mesh sieve, while present requirements demand that 78% pass a 200-mesh sieve. About 1890, German portland cements began to make large inroads on the English business because their cement was 50% finer ground than the English cements, and they had a slight price advantage. By this time, however, American portland cements were beginning to come into their own, and by 1897 home production surpassed the importations of foreign brands.

About fifty years ago, 1872 to be exact, at Coplay, Pennsylvania, the first attempt to manufacture portland cement in America was made by David O. Saylor, but for the next twenty-five years the industry developed slowly. Vertical kilns, similar to



Airplane View of the Marquette Plant on the
Vermillion River at La Salle, Ill.

the old lime burning kilns were used and as late as 1890 only one-third of a million barrels were produced annually in the United States.

A QUARTER CENTURY

In 1898, when the country was thunderstruck by the sinking of the "Maine" at Havana, when Marconi's wireless telegraphy first became a reality, when the first "horseless" carriage spluttered down Main Street, the Marquette Cement Manufacturing Co. was established at La Salle, as the first cement mill in Illinois, and is today the oldest cement company in the Mississippi Valley. The following item appeared in the columns of the La Salle Tribune, under date of March 22, 1899:

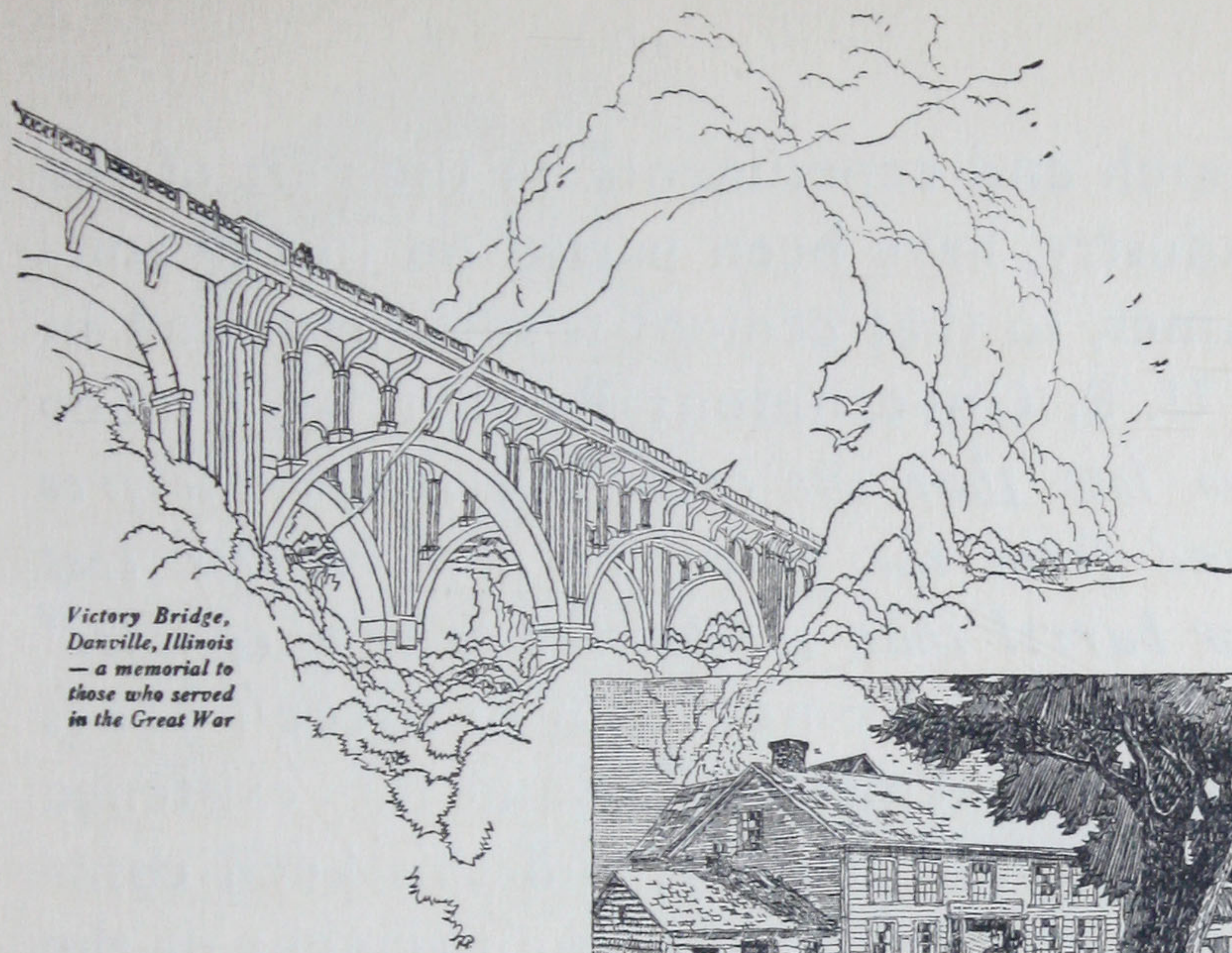
"The plant of the Marquette Portland Cement Company, formerly owned by the Dickinson Cement Company, at Deer Park, has been started in steady operation. The production at present will be 250 barrels. A large shipment was made to Iowa today, the first shipment of Portland Cement from the mills in Illinois."

At that time there were no standard specifications for portland cement and the price, tho basically determined by the cost of manufacture, varied with the quality of the product, the reputation of the manu-

facturer, and the number of hands thru which it passed before reaching the ultimate consumer. A cement, 90% of which passed thru the 100-mesh sieve and 72% thru the 200-mesh sieve, was considered of exceptional quality then.

In 1898, labor was hired for 15c per hour and coal cost about \$1.00 per ton. Cement then sold for \$2.00 per barrel. Altho the cost of these major items in the cost of producing cement have increased four and five times, and other costs proportionately as much, portland cement is sold today at relatively less than half its price twenty-five years ago.

This low price, approximately $\frac{1}{2}$ c per pound, has been made possible thru economies effected in large scale production, improved machinery, labor-saving equipment, and the elimination of various middlemen in merchandising the product. Today practically all cement goes direct from the manufacturer to the dealer, who, by creating time and place utility, that is, having cement when and where it is wanted, is entitled to the profit he receives for his service. It is apparent then that all the savings effected as a result of re-



*Victory Bridge,
Danville, Illinois
— a memorial to
those who served
in the Great War*



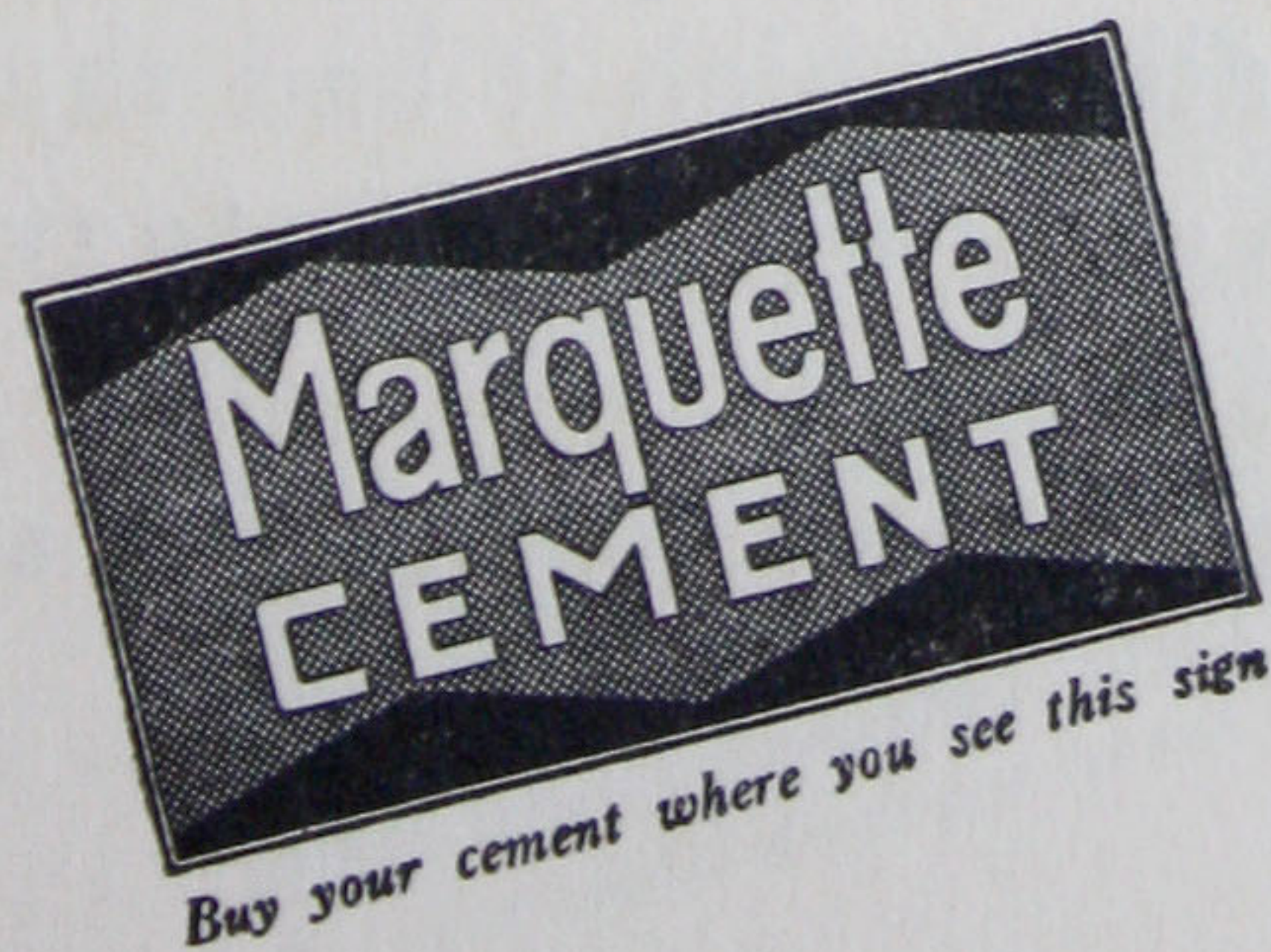
Law Office of Abraham Lincoln at Danville, Illinois, 1855

ABRAHAM LINCOLN—outstanding figure of the century—adamant in defeat, magnanimous in victory! Powerful as his influence was in life, it is greater still in death. Today, as never before, every section of the country unites to honor his name.

If the Great Emancipator were here now, how he would glory in this splendid memorial which stands in the country he knew and loved so well and which serves as a connecting link between his age and the present!

We're proud of the part we've played in building the Victory Bridge. For all time to come it will stand to commemorate the valor of those who gave their all in order that Democracy might live.

Marquette Cement Manufacturing Company, Marquette Building, Chicago
Plants at La Salle, Illinois — Cape Girardeau, Missouri



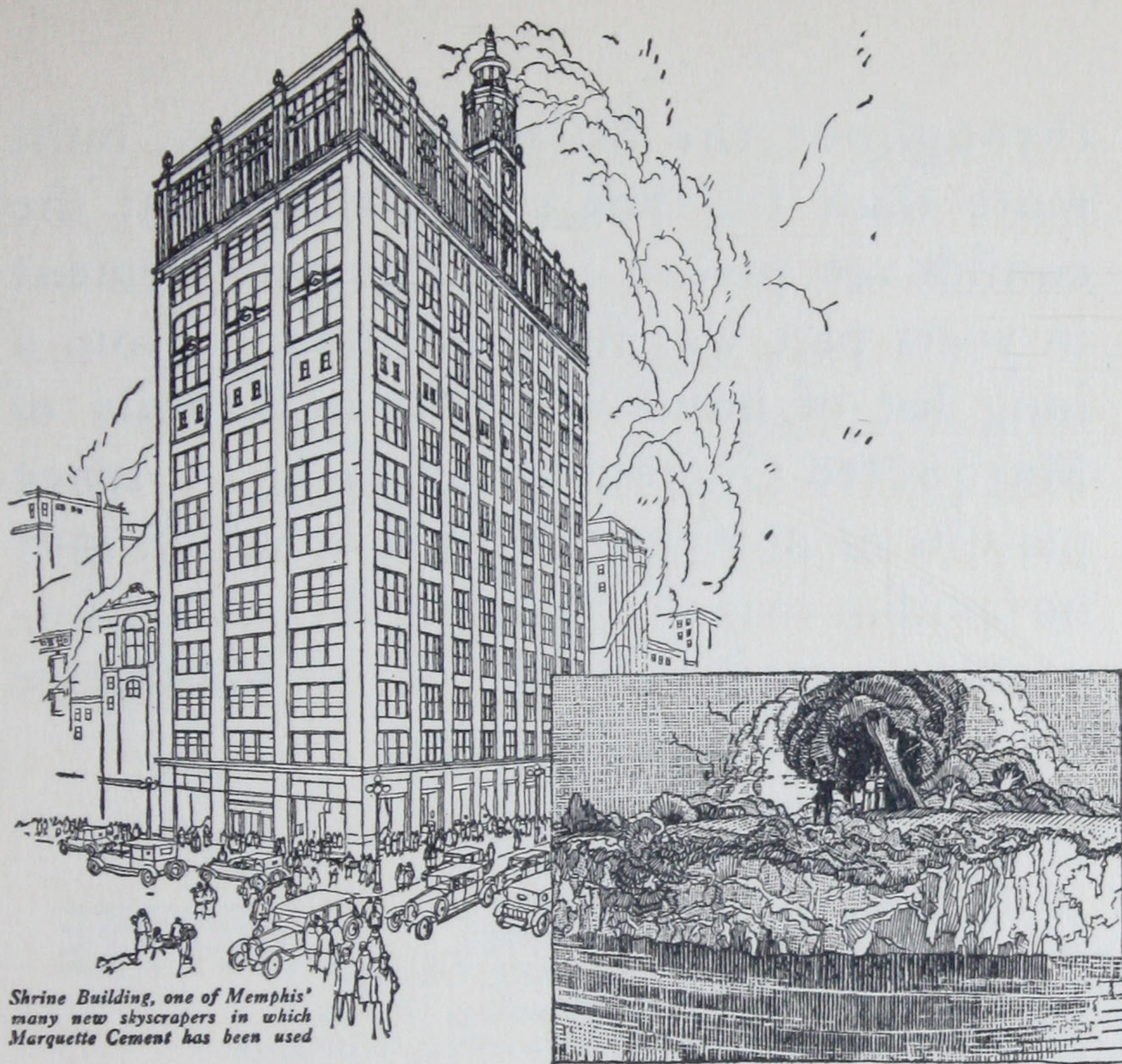
search and experiments on the part of the industry, have been passed on to the consumer, so that cement is sold, as stated in a U. S. Government Report, at a price *“so low that one could not scrape the free sand from the gutter at a much less cost per barrel than the present price of cement.”*

During the next ten or fifteen years numerous cement mills came into existence all over the country, and this keen competition enforced the improvement of the product and greater operating and merchandising economies, so that it was a case of survival of the fittest. Many portland cement concerns went into receivership and bankruptcy, and only those under the ablest management made a bare margin of profit on their investment during this period.

A DECADE

The fact that the Marquette Cement Manufacturing Company survived these trying years is attributed to the high quality of its product, the reputation for service and fair dealing which it had then gained, and to the courage and integrity of its management.

Many buildings and other structures



Shrine Building, one of Memphis' many new skyscrapers in which Marquette Cement has been used

De Soto discovering the Mississippi River where Memphis now stands, 1541

HERNANDO DE SOTO—adventurous spirit of a bygone age—discoverer of the mighty Mississippi! True it may be that his great find was but a “by-product” of the eternal quest for gold, yet like the “hand that rounded St. Peter’s dome,” he builded better than he knew.

In recent years, no part of the South has seen a more spectacular development than that section of which the city of Memphis is the center. We consider it a great privilege to have a part in the upbuilding of such a great, progressive country.

Marquette Cement Manufacturing Company
Union & Planters Bank Building, Memphis
Plants at La Salle, Illinois—Cape Girardeau, Missouri



Buy your cement where you see this sign

throughout the Mississippi Valley, built more than ten years ago, show that the confidence placed in Marquette Cement in years past was fully justified. From a long list of imposing structures built of Marquette Cement prior to 1915, space permits of naming only a few, which may be familiar to many. Among these more important enterprises served by Marquette Cement are the following:

Cook County Hospital, Chicago
Consumers Building, Chicago
Lyon & Healy Factory, Chicago
Society Brand Building, Chicago
Reid, Murdoch & Co. Building, Chicago
U. S. Government Dam, Sterling, Illinois
Grand Avenue Viaduct, Milwaukee, Wisconsin
Rawleigh Medical Co. Building, Freeport, Illinois
Rand McNally Building, Chicago
Great Northern Elevator, "S," Superior, Wisconsin
Sixteenth Avenue Bridge, Cedar Rapids, Iowa
Marathon Paper Mills, Rothschild, Wisconsin
St. Paul Hotel, St. Paul, Minnesota
Kimberly Clark Paper Mills, Kimberly, Wisconsin
La Salle Street Tunnel, Chicago
*(Other buildings are shown in the composite photograph,
following.)*

Ten years ago the durable qualities of concrete for highway construction, with its resulting economies, first became generally realized. Since that time hundreds of miles of concrete highways in the middle western states built of Marquette Cement, not to mention concrete foundations for other types of paving, testify that the



Modern Green Bay, the oldest city of the Mississippi Valley and the birthplace of government in the Northwest



Jean Nicolet landing at Red Banks, on the shores of Green Bay, "Plymouth Rock of the West," 1634

NEARLY three centuries ago, just 14 years after the Pilgrims disembarked at Plymouth Rock, Jean Nicolet—first white man to see Lake Michigan—forerunner of a great band of missionaries, explorers and fur traders—landed on the shores of Green Bay. He failed to find what he sought—a short route to China and Japan!—but he did find everlasting fame as the discoverer of the great Northwest.

Following Nicolet came Radisson, Groseilles, Joliet and the missionaries Allouez and Marquette. Here the French built their first fort (1671-1721), which they controlled until the Battle of Quebec, when it fell into British hands, later passing to the Americans after the War of 1812. Here government for Wisconsin and the Northwest was born. All three nations who claimed Wisconsin controlled and governed it from Green Bay.

Times and conditions have changed greatly since those stirring days, but this section is quite as important in the new order of things as it was in the old. We are glad to be able to serve the requirements for portland cement in such a land of achievement.

Marquette Cement Manufacturing Company, Marquette Building, Chicago
Plants at La Salle, Illinois—Cape Girardeau, Missouri



A MARQUETTE CITY

Built
OVER TEN YEARS AGO

La Salle Hotel	Marshall Field Annex Building
Conway Building	Peoples Gas Building
Lytton Building	Chicago City Hall
Chicago & Northwestern Railway Passenger Terminal	

Architects

Holabird & Roche
Graham, Burnham & Co.
Frost & Granger
Marshall & Fox

Contractors

Noel Construction Co.
John Griffiths & Sons
Lanquist & Illsley Co.
Thompson-Starrett Co.
Henry Ericsson Co.
George A. Fuller Co.









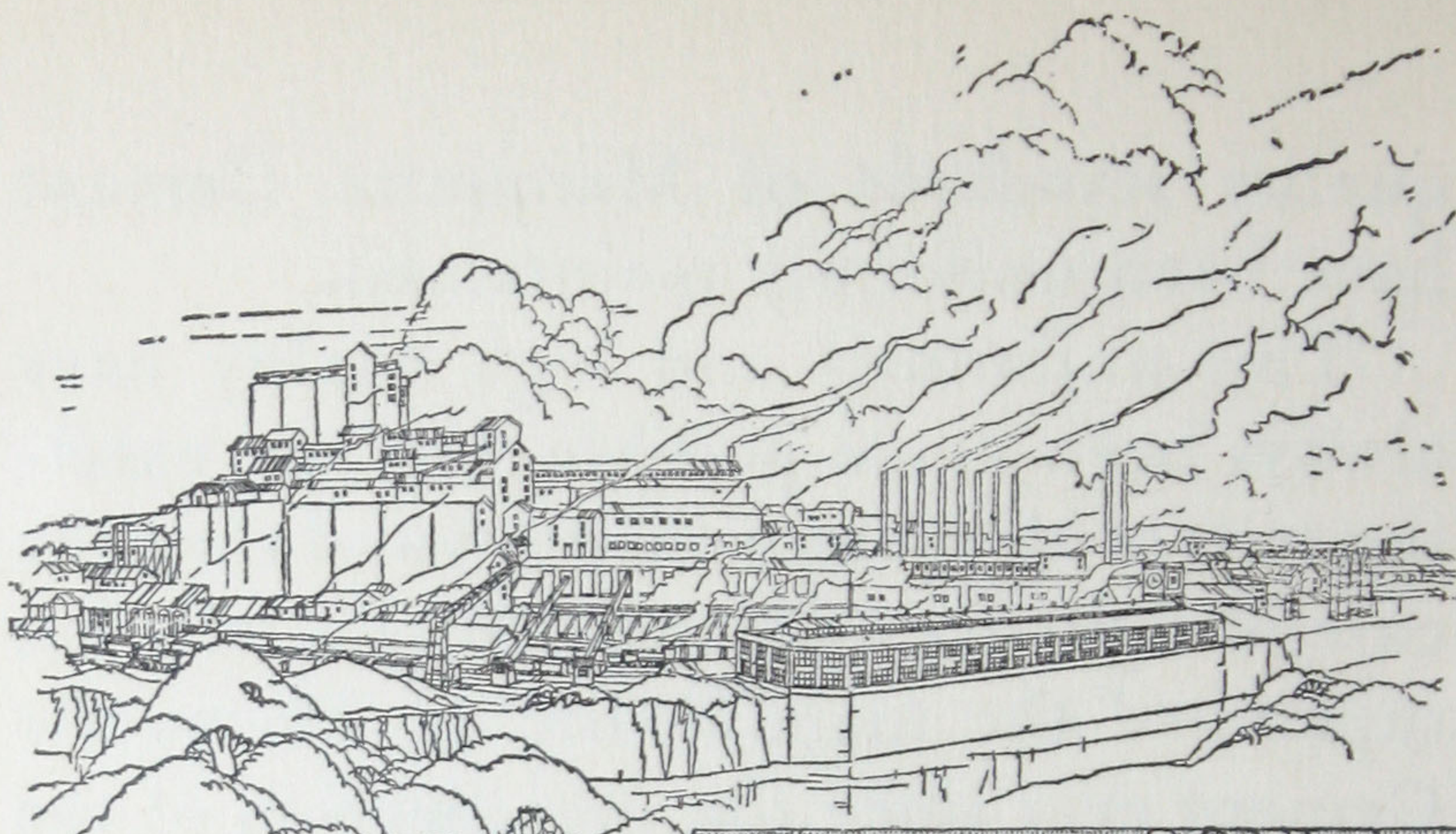
quality standards of Marquette Cement have been uniformly maintained.

This uniformity and high quality have always been made possible thru the exacting tests of Marquette chemists and thru the careful vigilance of Richard Moyle, who has supervised the manufacture of Marquette Cement ever since the organization of the company.

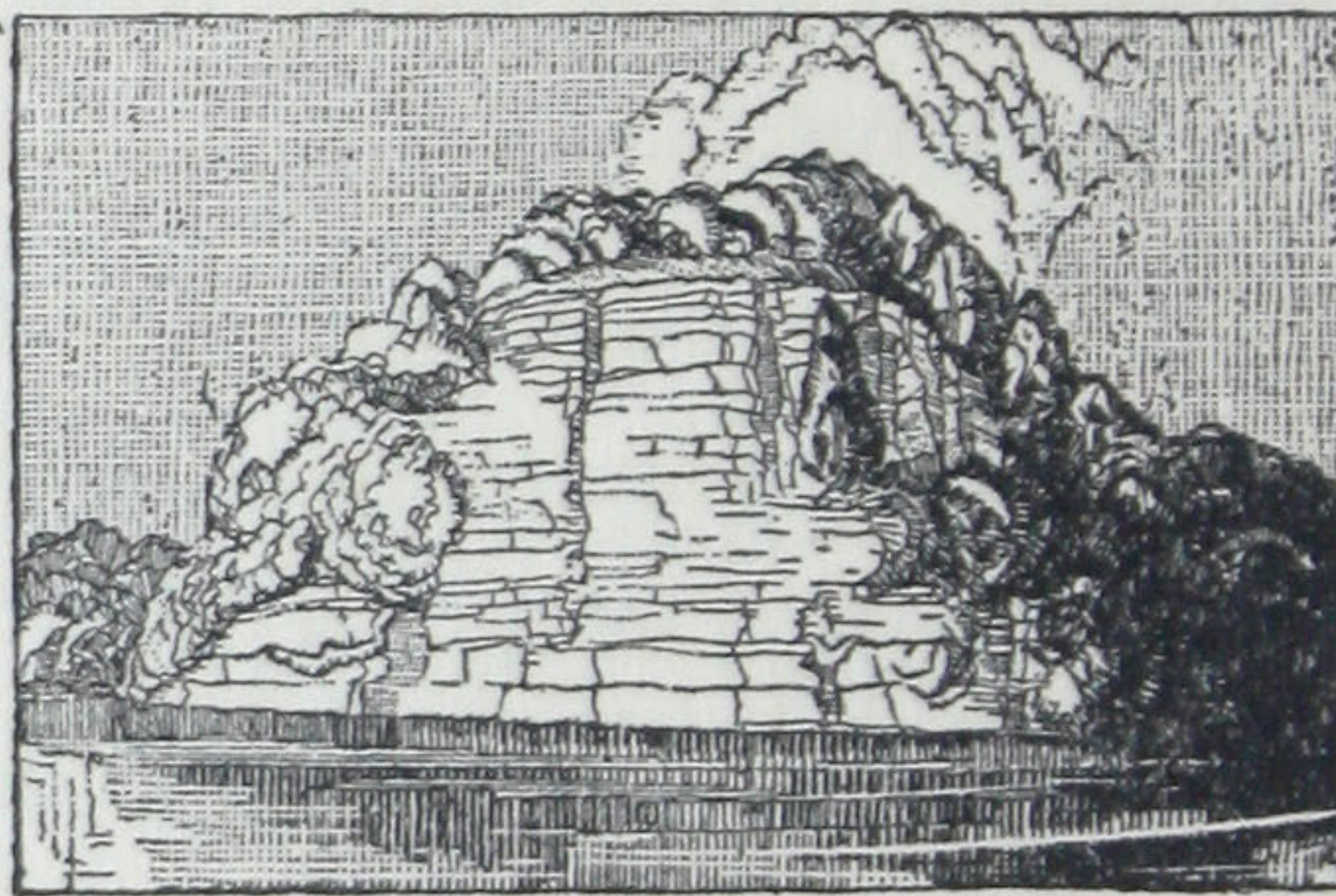
THE PRESENT

Having established itself in the upper Mississippi Valley, the Marquette Cement Manufacturing Company, in May, 1923, purchased the Cape Girardeau Portland Cement Company, of Cape Girardeau, Missouri, and extended its field of operation to the Southern Central States.

This acquisition was made with vision and faith in the development of the South and a corresponding increase in the demand for portland cement. Plans for a larger productive capacity were immediately inaugurated and additional equipment installed. Greater operating efficiency with larger storage and shipping facilities at once made possible the increasing of the output, at the same time maintaining high quality standards.



*Marquette Cement plant,
LaSalle, Illinois; reached
by the Lone Star Highway*



*Starved Rock, on the Illinois River, one of the most
interesting historical points of the Central West*

BEAUTIFUL STARVED ROCK—Gibraltar of the Mississippi Valley—what harrowing tales of conflict you could tell!

Here LaSalle and Tonti had their stronghold in 1681 (Fort St. Louis). Here, nearly a century later, the last of the Illini took refuge when defeated by the Pottawatomies, only to find their impregnable fortress a death trap—that they had escaped the tomahawk to perish by starvation.

Now industry hums and motor cars roar through the valley where once was heard little but the swish of speeding arrow and stealthy canoe. And the immense Marquette plant is busy day and night, turning out the kind of portland cement that insures buildings and public improvements as sturdy and enduring as this age-old sentinel of the past.

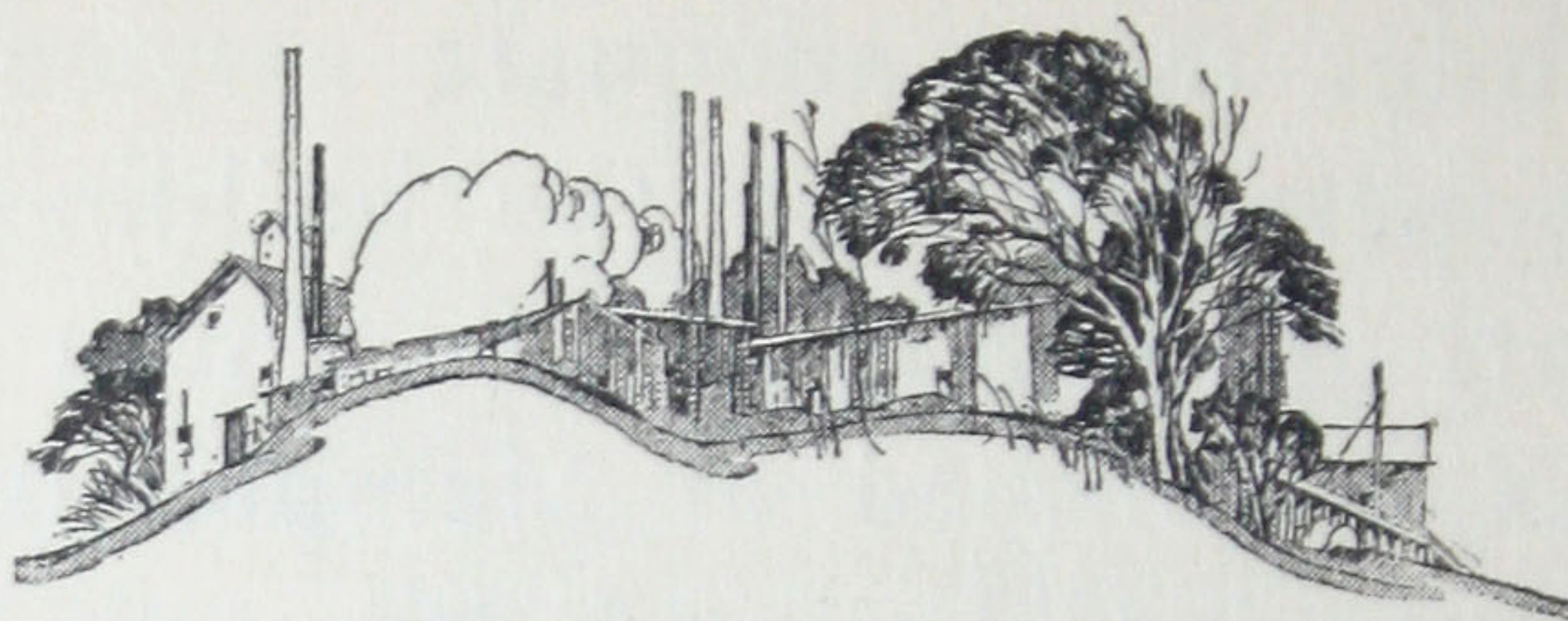
Marquette Cement Manufacturing Company, Marquette Building, Chicago
Plants at La Salle, Illinois—Cape Girardeau, Missouri



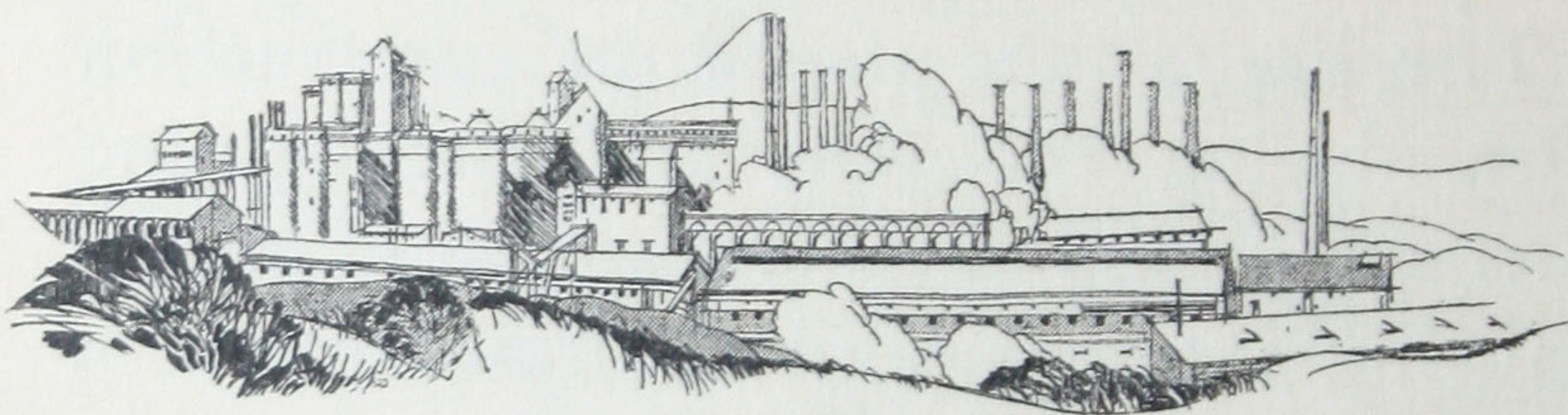
To render more adequate service and closer cooperation with the building requirements of the South, a Southern sales office was established at Memphis in the newly constructed Union & Planters Bank Building, which incidentally was built with Marquette Cement.

The limitations placed on construction work during the war, and the ensuing shortage of homes, the expansion of manufacturing interests, and the resumption of construction projects of all kinds brought about an unprecedented boom in building activities in the years following the armistice.

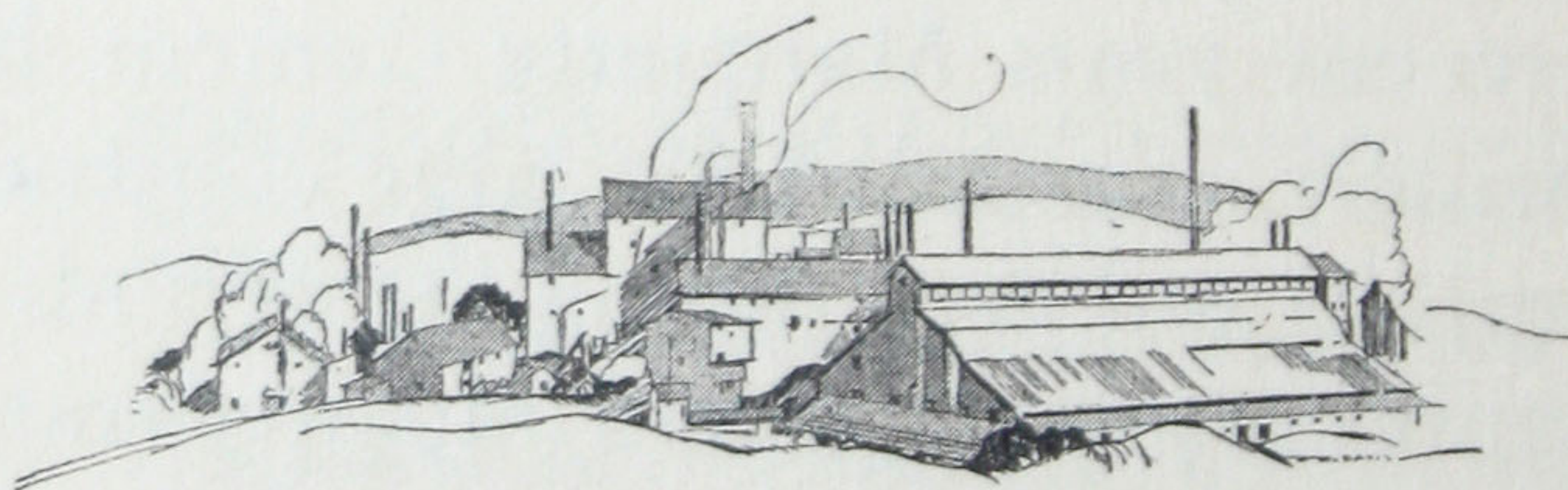
In recent years Marquette Cement has been widely demanded for large construction projects and even during the periods of most acute car shortages, and impaired transportation service, the location of the La Salle mill on five trunk line railroads has made possible the filling of contracts and obligations and the rendering of efficient dealer service. The construction of two warehouses last year, with storage capacity for about one and a half million sacks, at Davenport, Iowa, and Chicago, is indicative of a constant desire to improve service facilities.



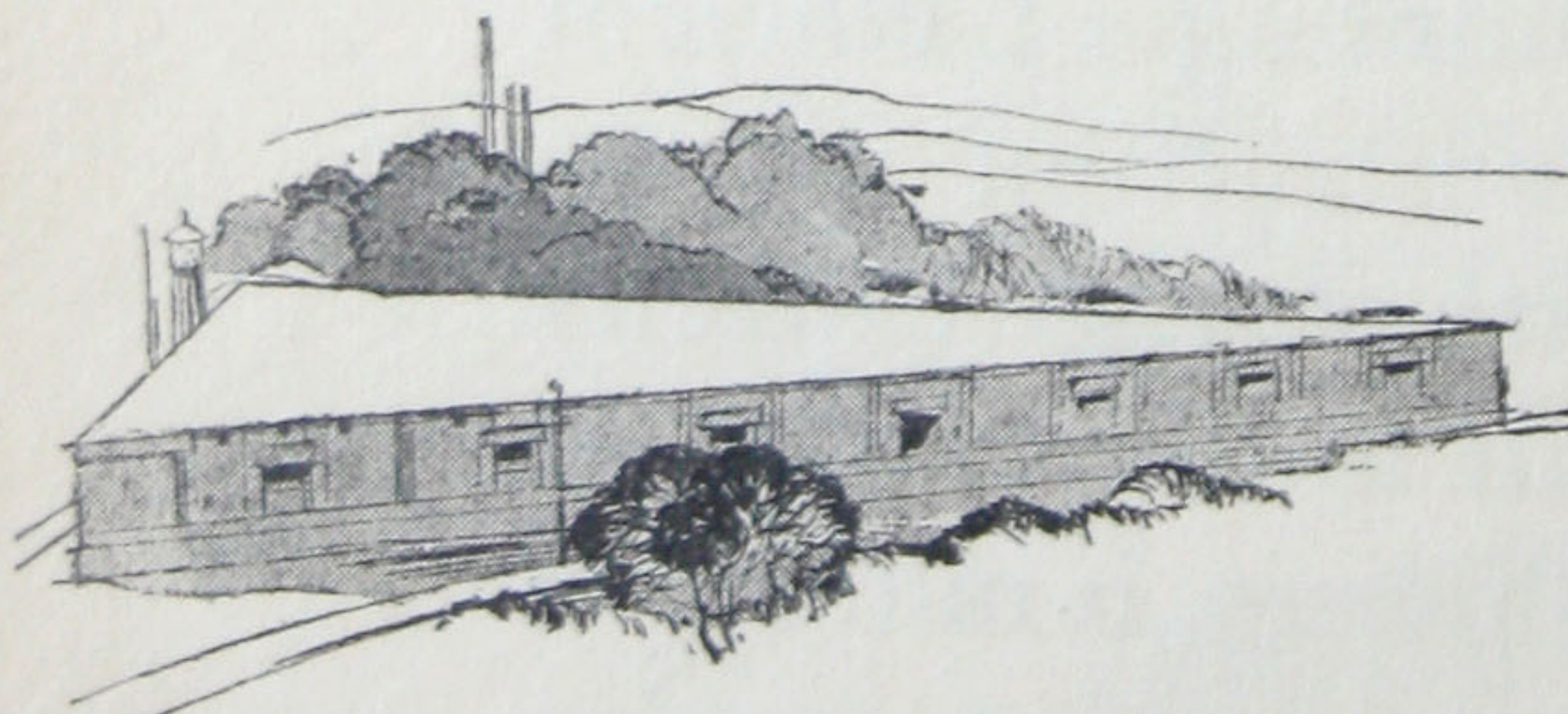
This is where Marquette Cement started twenty-five years ago



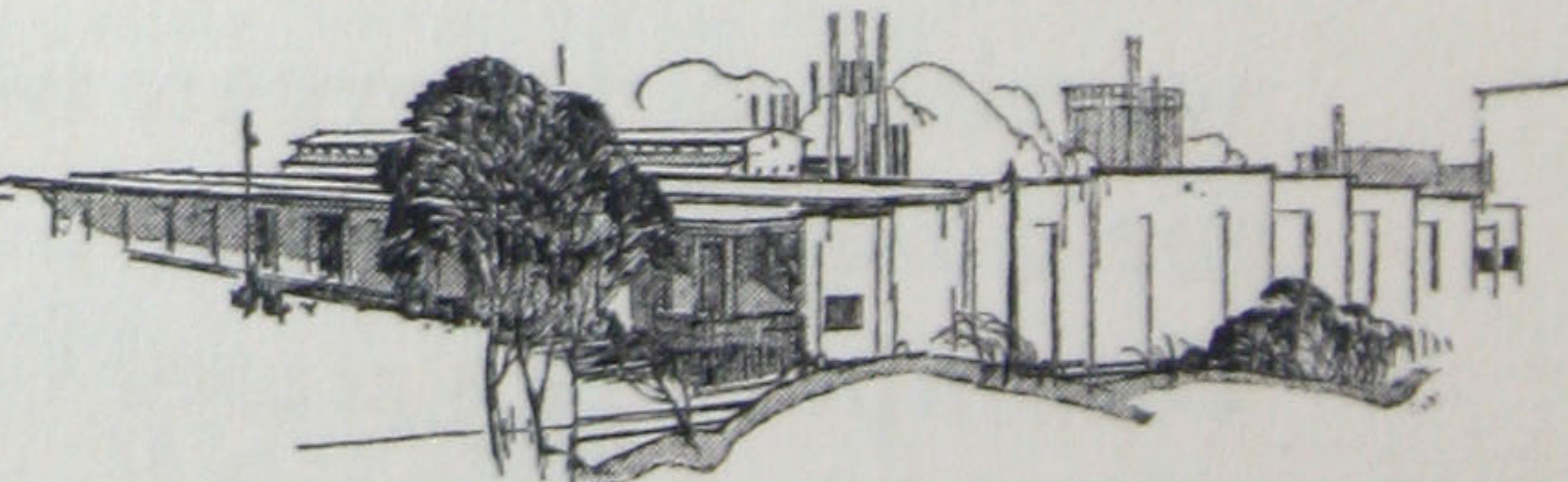
Marquette Cement plant at La Salle, Illinois, which supplies the greater part of the Middle West



Plant at Cape Girardeau, Missouri, which takes care of the increasing construction activities of the South



Davenport, Iowa, warehouse, another unit that has helped put the "Serve" in Marquette Service



Chicago warehouse, from which Marquette Cement can be shipped to all nearby points with efficiency and dispatch

Among the larger structures more recently built of Marquette Cement may be mentioned:

North Avenue Viaduct, Milwaukee, Wisconsin
Decatur Dam and Impounding Project, Decatur, Illinois
Jefferson and Washington High Schools, Dubuque, Iowa
Union Trust & Savings Bank, Dubuque, Iowa
Drake Hotel, Chicago,
New State Hospital, Madison, Wisconsin
Peoria Life Insurance Building, Peoria, Illinois
Victory Bridge, Danville, Illinois
Union & Planters Bank Building, Memphis, Tennessee
Shrine Building, Memphis, Tennessee
Illinois Merchants Bank Building, Chicago
Park View Apartments, Memphis, Tennessee
New Methodist Hospital, Memphis, Tennessee
Hotel Peabody, Memphis, Tennessee
Graemere Hotel, Chicago
Tribune Tower, Chicago

all designed and built by many of the country's most prominent architectural, engineering and contracting firms.

Advertising in nearly all its forms has been used to acquaint the people of the Mississippi Valley with the Marquette trademark, and the product and service which it represents. The distinctive trademark with the suggestion "Buy Your Cement Where You See This Sign" has appeared with various presentations in hundreds of newspapers, farm papers, trade papers and magazines. Direct mail advertising has been utilized extensively. In the outdoor field Marquette Highway



North Avenue Viaduct, Milwaukee; one of the many projects in this territory in which Marquette Cement has been used



Chevalier de La Salle's first visit to Milwaukee, about 1679

MILWAUKEE, since the dawn of history in the great Northwest, has always held a position of peculiar importance.

Situated midway between the settlements at Green Bay and the Chicago portage leading to the Mississippi Valley, it was the meeting place of missionary, Indian, fur trader and voyageur for nearly two centuries. Louis Joliet, Pere Marquette, Robert de La Salle, Henri Tonti were early visitors and their names will always be associated with this section.

Today Milwaukee takes first rank among the great cities of the world, exceeding the most sanguine dreams of her founders. Within its borders are to be found many splendid buildings and public improvements in the construction of which portland cement has been used extensively. We consider it a privilege to have had a part in this development.

Marquette Cement Manufacturing Company, Marquette Building, Chicago
Plants at La Salle, Illinois—Cape Girardeau, Missouri

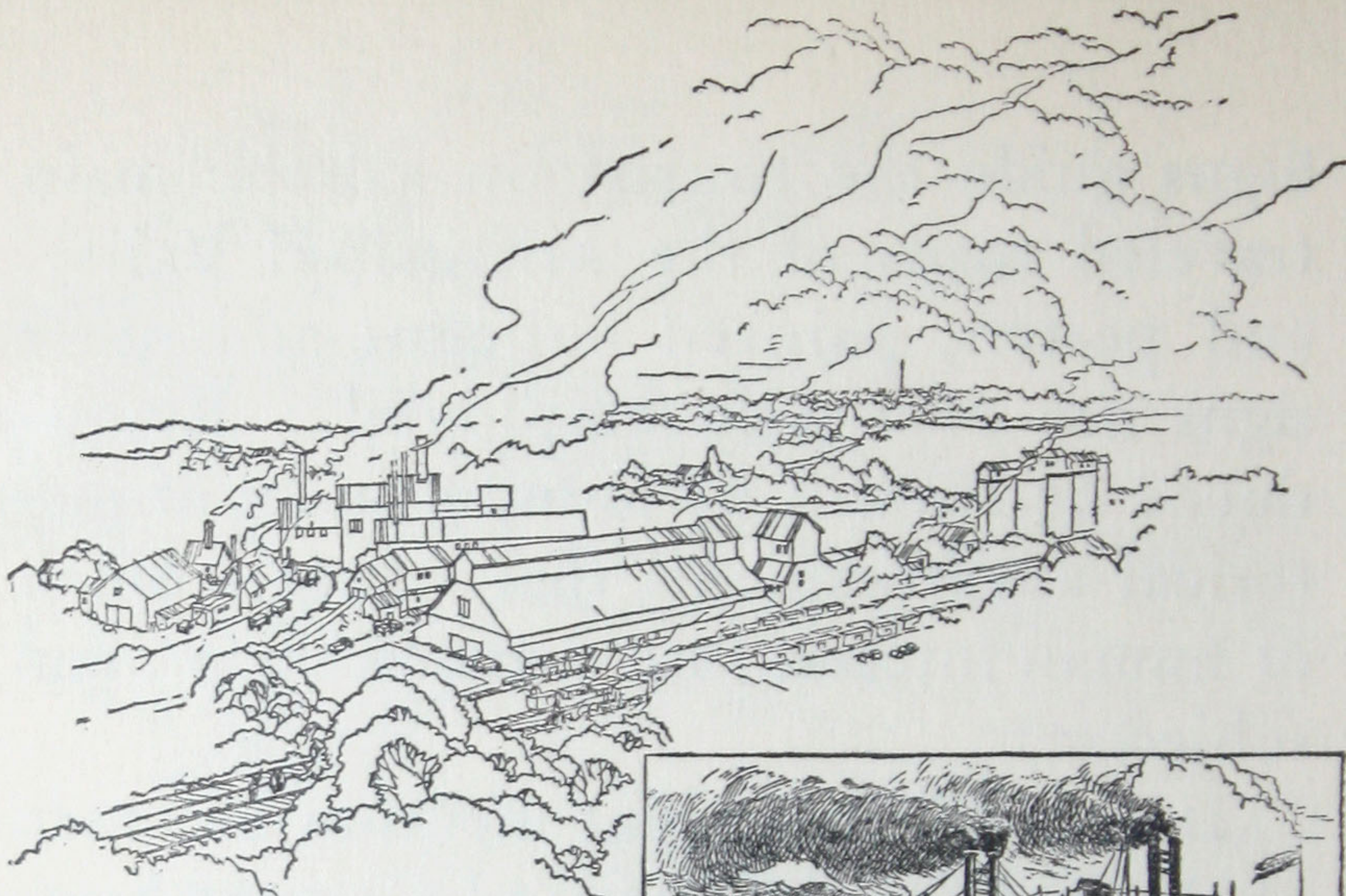


Buy your cement where you see this sign

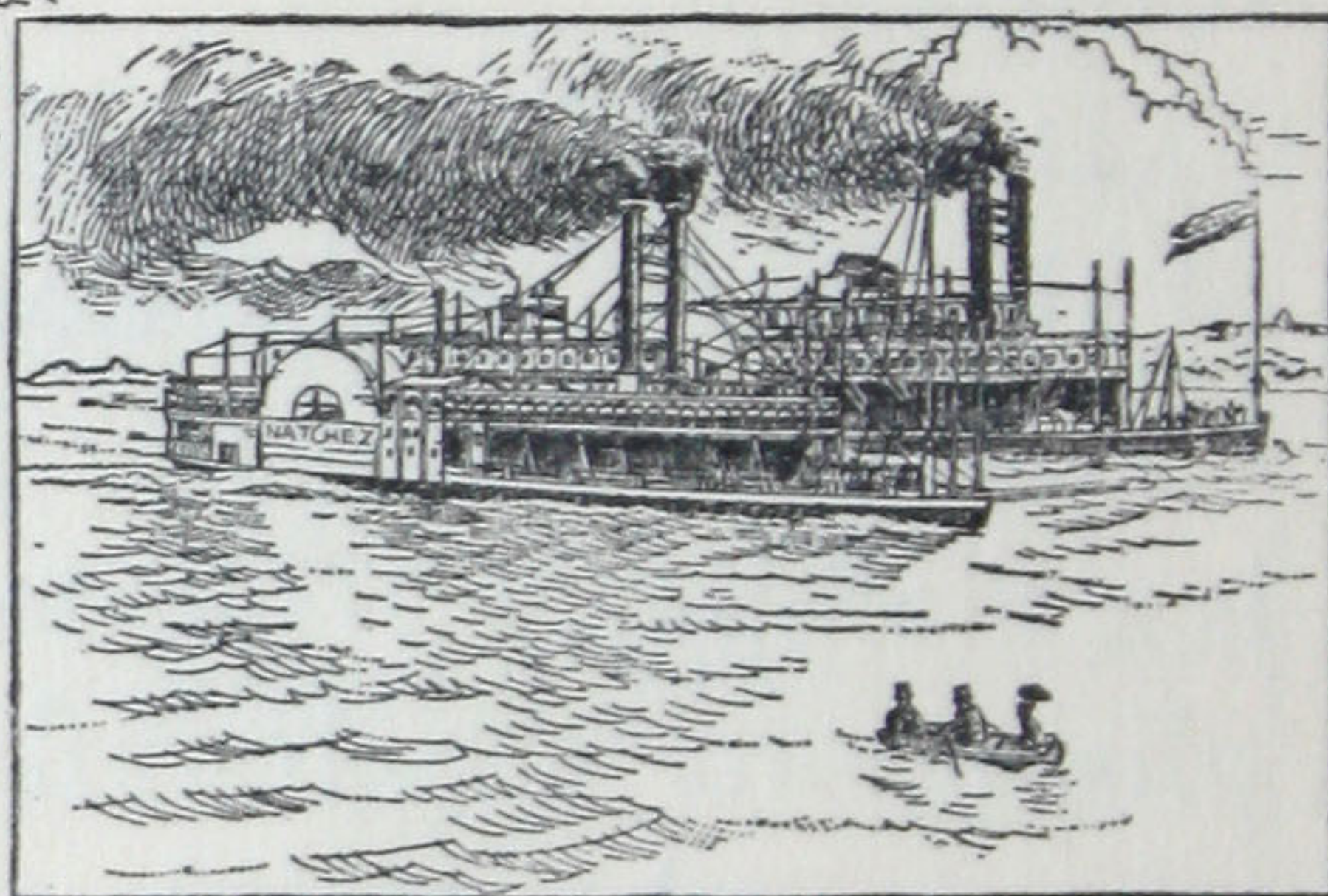
Signs guide the tourist on all the main traveled roads of the Mississippi Valley, and posters, painted bulletins and other signs are effectively employed. Reproduced herein will be found a series of historical advertisements that weave a touch of human interest into a somewhat prosaic subject.

It is most fitting that mention be made of the work of the Portland Cement Association, of which the Marquette Company is a member. Its history, aims and accomplishments are briefly enumerated in a recent publication of the United States Geological Survey, Department of the Interior, from which the following extract regarding the Portland Cement Association is quoted:

"It began in 1902, when a group of about 20 cement manufacturers met in Philadelphia to consider the cement sack problem. Within a year common interests drew into the organization producers of 90 per cent of the output of Portland Cement in the United States, and at present more than 95 per cent of the domestic output is represented by membership in the organization, which now extends also to manufacturers in Canada, Mexico, Cuba, Argentina and Uruguay. From a single paid employee in 1902-1905, the staff of the association



Marquette Cement plant at Cape Girardeau, Missouri. It is this plant that serves the builders of the Southern Mississippi Valley



Famous race between the Robt. E. Lee and the Natchez, from New Orleans to St. Louis, 1870. The Lee won in 3 days, 18 hours and 14 minutes

THERE are hundreds of men living today who remember that memorable race between the Robt. E. Lee and the Natchez more than 50 years ago.

The entire Mississippi Valley was agog with excitement and more than a million dollars was wagered on the result. Thousands of people gathered at all vantage points along the shore from New Orleans to St. Louis to see the boats speed past and cheer their favorite. It was "neck and neck" until they reached Cairo, when the Lee took a comfortable lead and was never again threatened by her rival.

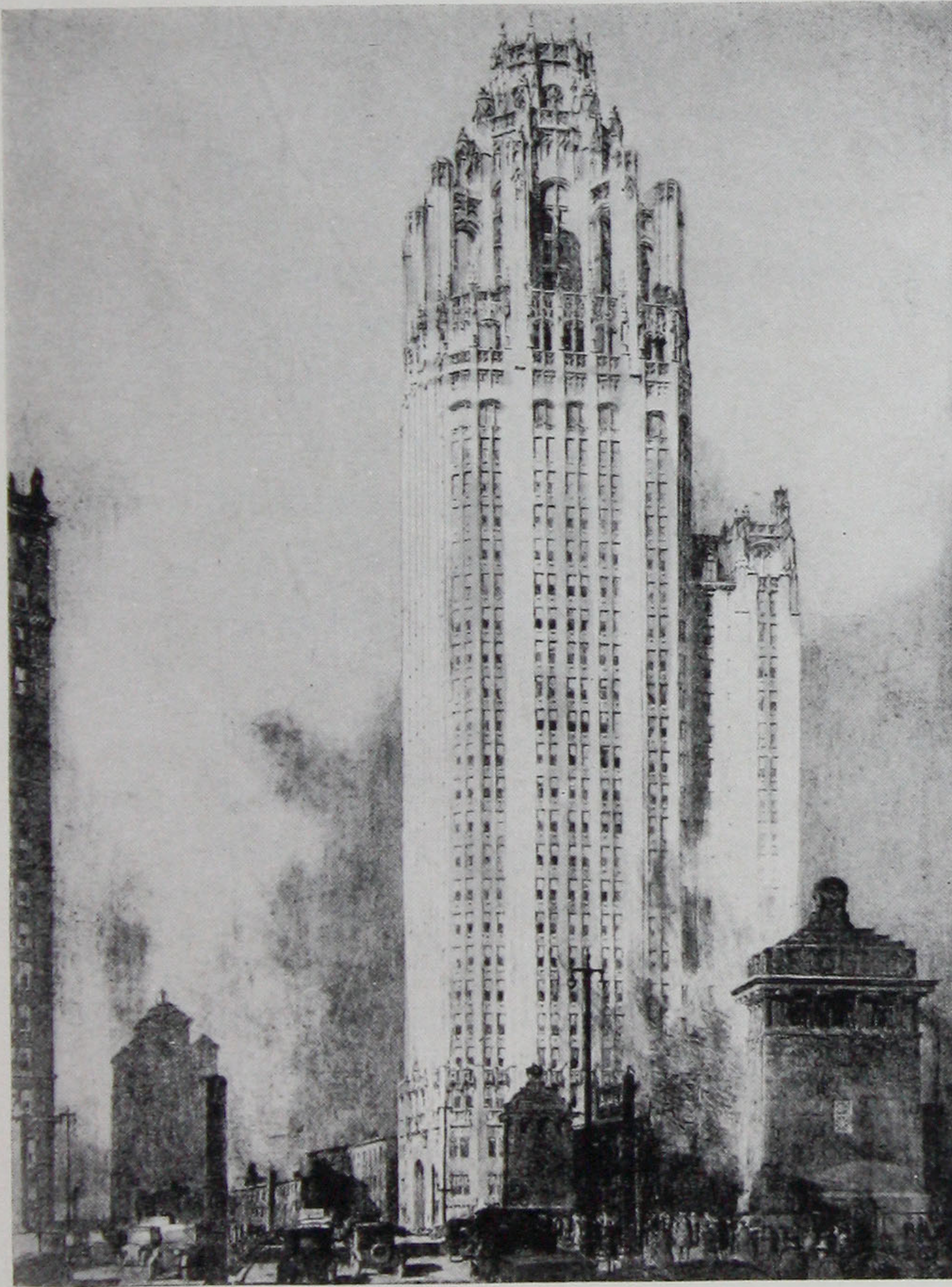
Since those days the importance of the Mississippi as a freight-carrying highway has declined, but with the revival of the waterways project there is every reason to believe the mighty river will soon regain its old prestige. In the developments of the future, Marquette Cement is destined to play an even greater part than it has in the past.

Marquette Cement Manufacturing Company
Union & Planters Bank Building, Memphis
Plants at La Salle, Illinois—Cape Girardeau, Missouri



Buy your cement where you see this sign

MORE RECENT ST
BUILT WI
MARQUETTE C



TRIBUNE TOWER, Chicago
JOHN M. HOWELLS-RAYMOND HOOD, Chicago
Associated Architects
R. C. WIEBOLDT CO., Chicago
HEGEMAN-HARRIS CO., Inc., Chicago
Contractors



HOTEL PEABODY, Memphis,
WALTER W. AHLSCHLAG
Architect
B-W CONSTRUCTION CO.,
Contractors

*Above—*NEW STATE HOSPITAL, M
ARTHUR PEABODY, Madis
State Architect
IMMEL CONSTRUCTION C
Contractors

MORE RECENT STRUCTURES
BUILT WITH
MARQUETTE CEMENT



TRIBUNE TOWER, Chicago
JOHN M. HOWELLS-RAYMOND HOOD, Chicago
Associated Architects
R. C. WIEBOLDT CO., Chicago
HEGEMAN-HARRIS CO., Inc., Chicago
Contractors

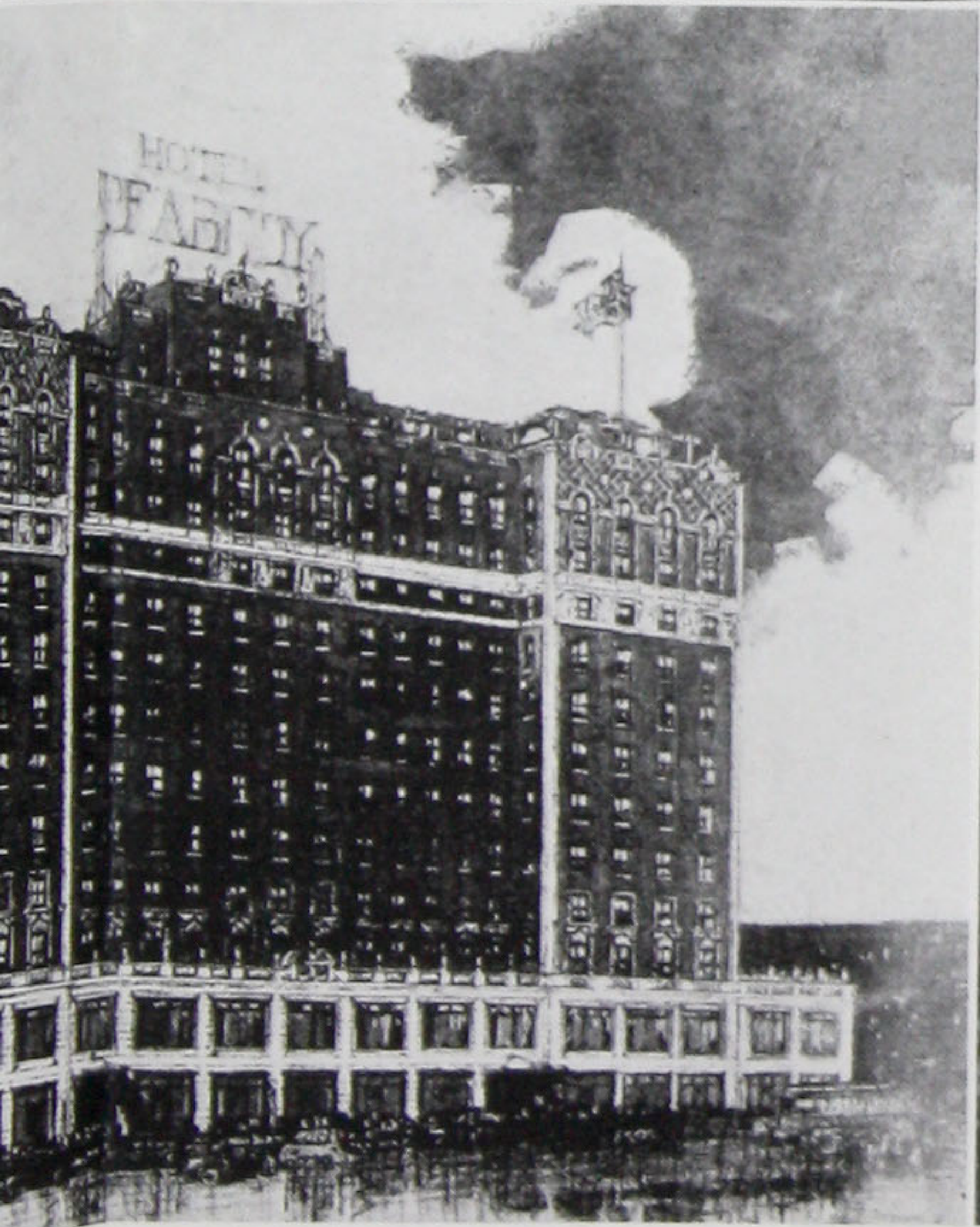


HOTEL PEABODY, Memphis, Tenn.
WALTER W. AHLSCHLAGER, Chicago
Architect
B-W CONSTRUCTION CO., Chicago
Contractors



Above—NEW STATE HOSPITAL, Madison, Wis.
ARTHUR PEABODY, Madison, Wis.
State Architect
IMMEL CONSTRUCTION CO., Madison
Contractors

ENT STRUCTURES ILT WITH ETTE CEMENT



Y, Memphis, Tenn.
AHLSCHLAGER, Chicago
Architect
CONSTRUCTION CO., Chicago
Contractors

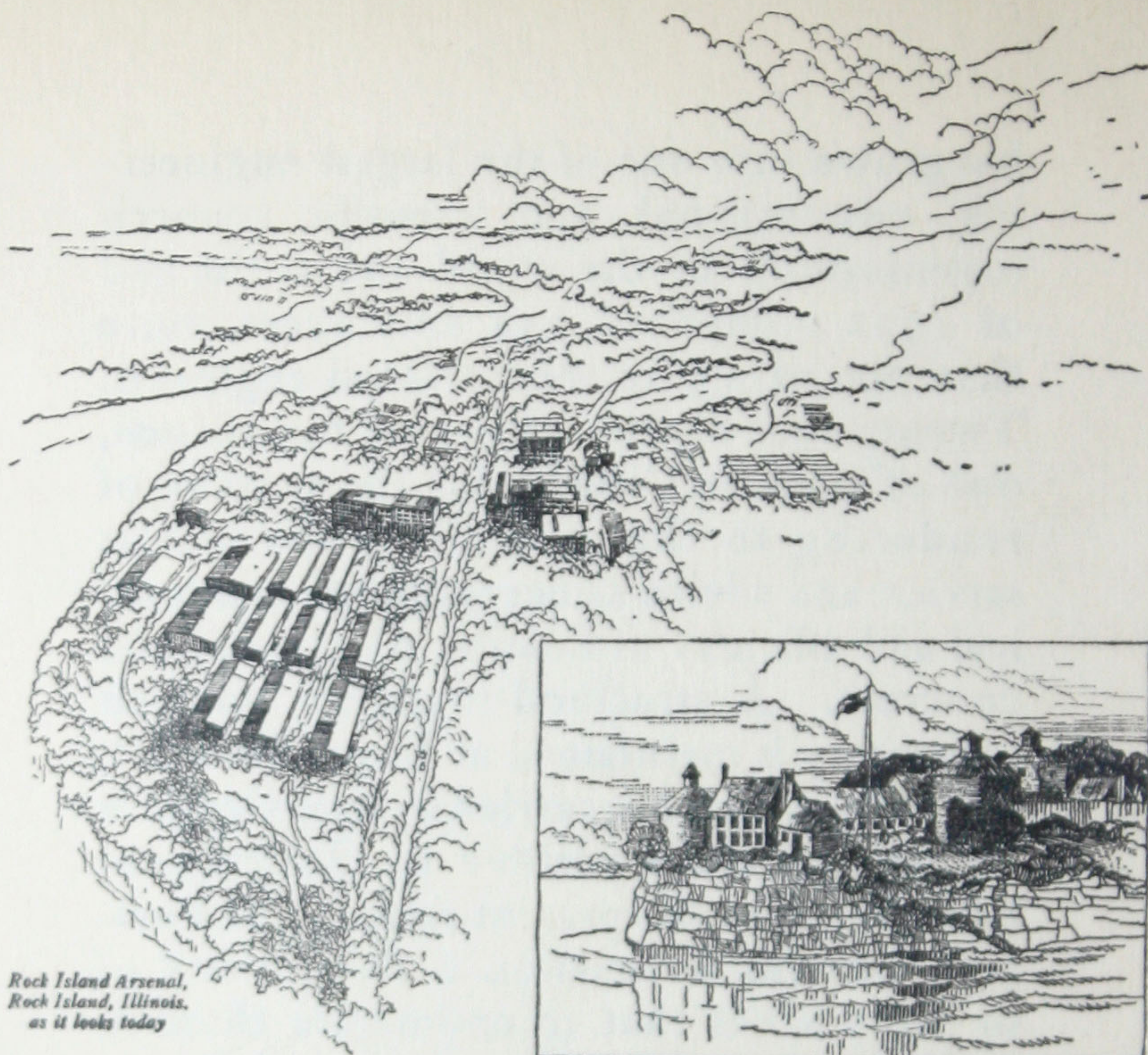
HOSPITAL, Madison, Wis.
BODDY, Madison, Wis.
State Architect
CONSTRUCTION CO., Fond du Lac, Wis.
Contractors

ILLINOIS MERCHANTS BANK BUILDING, Chicago
GRAHAM, ANDERSON, PROBST & WHITE, Chicago
Architects
HENRY ERICSSON CO., Chicago
Contractors

has grown into one of the largest engineering, educational, and scientific research organizations in the world and at the end of 1922 comprised 342 employees, more than 200 of whom were trained engineers. Twenty-four district offices are maintained, one of them in Canada, for the purpose of rendering to the public free the utmost service and advice concerning the economical and efficient utilization of cement and concrete. A structural-materials research laboratory is maintained at Lewis Institute, Chicago, which has carried its investigations far beyond those possible to Government laboratories at the present time. The Portland Cement Association is doing work of so many kinds that to enumerate them in detail here would require too much space, but it is rendering so broad a service to the public that a brief outline of its activities and publications may well be furnished by the Geological Survey, which has occasion continually to refer correspondents to the association for data that are commonly believed to be obtained by the Government."

It may be added that membership in the Association requires that the product shall meet accepted engineering standards, which correspond to the United States Government specifications for portland cement.

In the first paragraph the statement was made that portland cement has added over



*Rock Island Arsenal,
Rock Island, Illinois,
as it looks today*

Old Fort Armstrong, 1816, first fortification on Rock Island

ROCK ISLAND ARSENAL—pride of the Tri-Cities, Moline, Davenport and Rock Island—for more than a century has stood as a bulwark of civilization in the great western country.

Here Fort Armstrong, the original stronghold, was built in 1816, and served for a score of years—through the Winnebago and Black Hawk Wars—as the refuge of the earlier settlers. Here the first bridge across the Mississippi was built in 1856 and six years later the first building of the present arsenal.

During the later years of the Civil War and the Spanish-American War there was some activity here, but it was not until the Great War that its real development was reached. Today Rock Island, with buildings alone valued at nearly \$20,000,000, stands as one of the great arsenals of the world. In a number of the recent buildings, Marquette Cement was used.

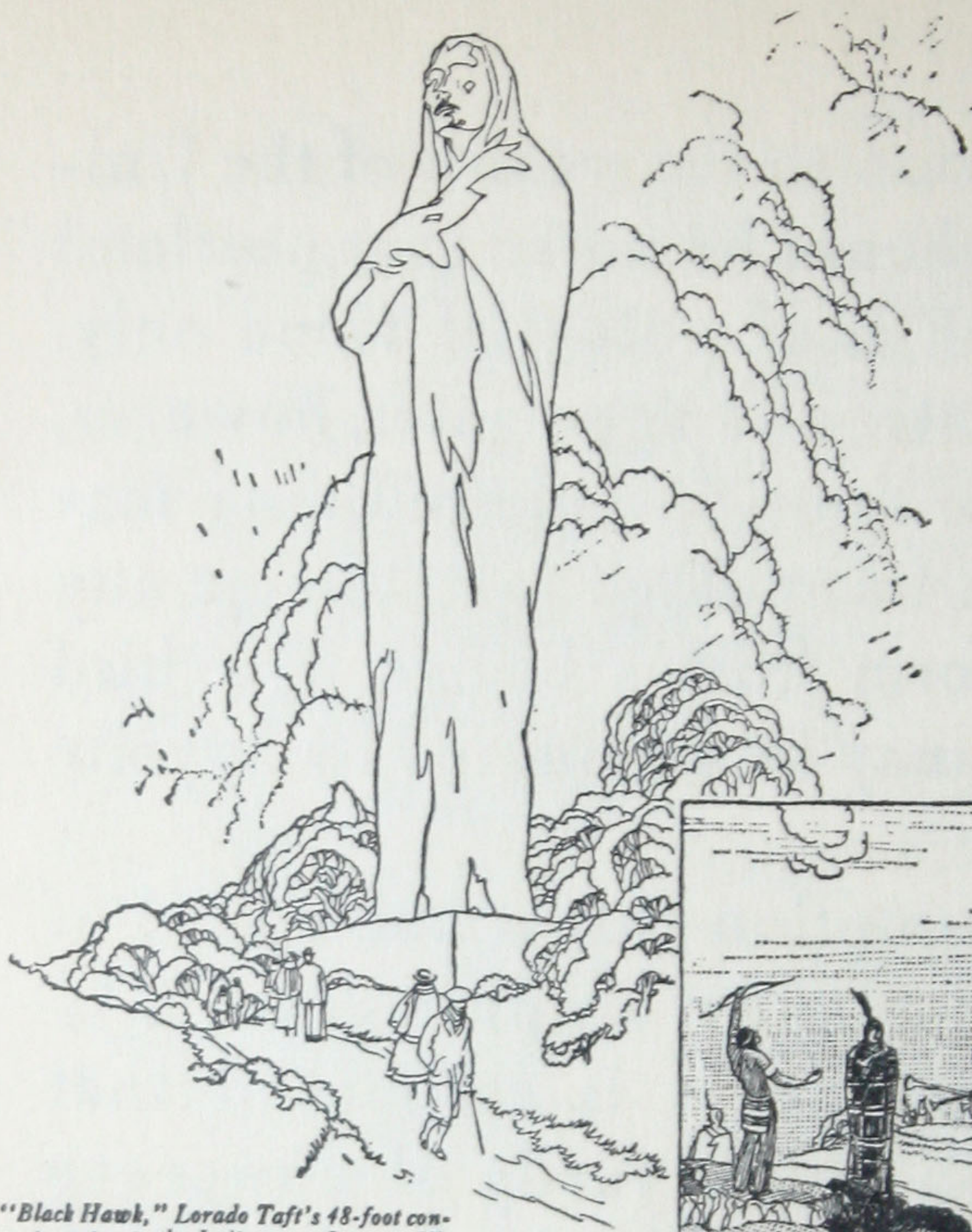
Marquette Cement Manufacturing Company, Marquette Building, Chicago
Plants at La Salle, Illinois — Cape Girardeau, Missouri



\$12,000,000,000 to the wealth of the United States. It should be noted that portland cement as such is of potential value only. Mixed with water and aggregates, however, it becomes our most durable building material and can be molded into almost any conceivable form from a bridge to a bird bath. Its use may be attempted by anyone anywhere.

On the assumption that a cubic yard of concrete will require an average of $1\frac{1}{2}$ barrels of cement, it is estimated that 1,040,000,000 cubic yards of concrete have been placed in the United States. This amount of concrete at a price of \$12.00 per cubic yard would make its total value equal \$12,480,000,000. The amount of concrete which has been replaced or destroyed is comparatively negligible.

The annual output of portland cement is about half the tonnage either of pig-iron or of steel, but the finished concrete, which in construction work, is more fairly comparable with iron or steel, weighs at least five times as much as cement and so exceeds the combined output of iron and steel. In this connection it is interesting to note



"Black Hawk," Lorado Taft's 48-foot concrete statue to the Indians, at Oregon, Illinois. Although not of Marquette Cement it nevertheless typifies the extreme adaptability of portland cement concrete



Party of Winnebagoes capturing Black Hawk, 1832

BLACK HAWK, chief actor in the war that bears his name (1831-1832) was one of America's first "self-made men." Though neither a hereditary nor an elected chief, his great bravery and personal magnetism caused him to be recognized as their war leader by the Sauk and Fox tribes.

That period furnished some of the most stirring events in the history of the Mississippi Valley. Lincoln took up arms against the redoubtable warrior. Colonels Henry Dodge and James D. Henry with their Michigan volunteers defeated him at Wisconsin Heights, opposite Prairie du Sac. Following that he was decisively defeated by General Atkinson and later captured by a band of Winnebagoes. He was released in 1837 and settled on the Sauk and Fox reservation in Iowa, where he died the next year.

In this section today the building of forts and stockades has given place to the construction of homes, skyscrapers and great public improvements. In many of these Marquette Cement is privileged to play a leading part.

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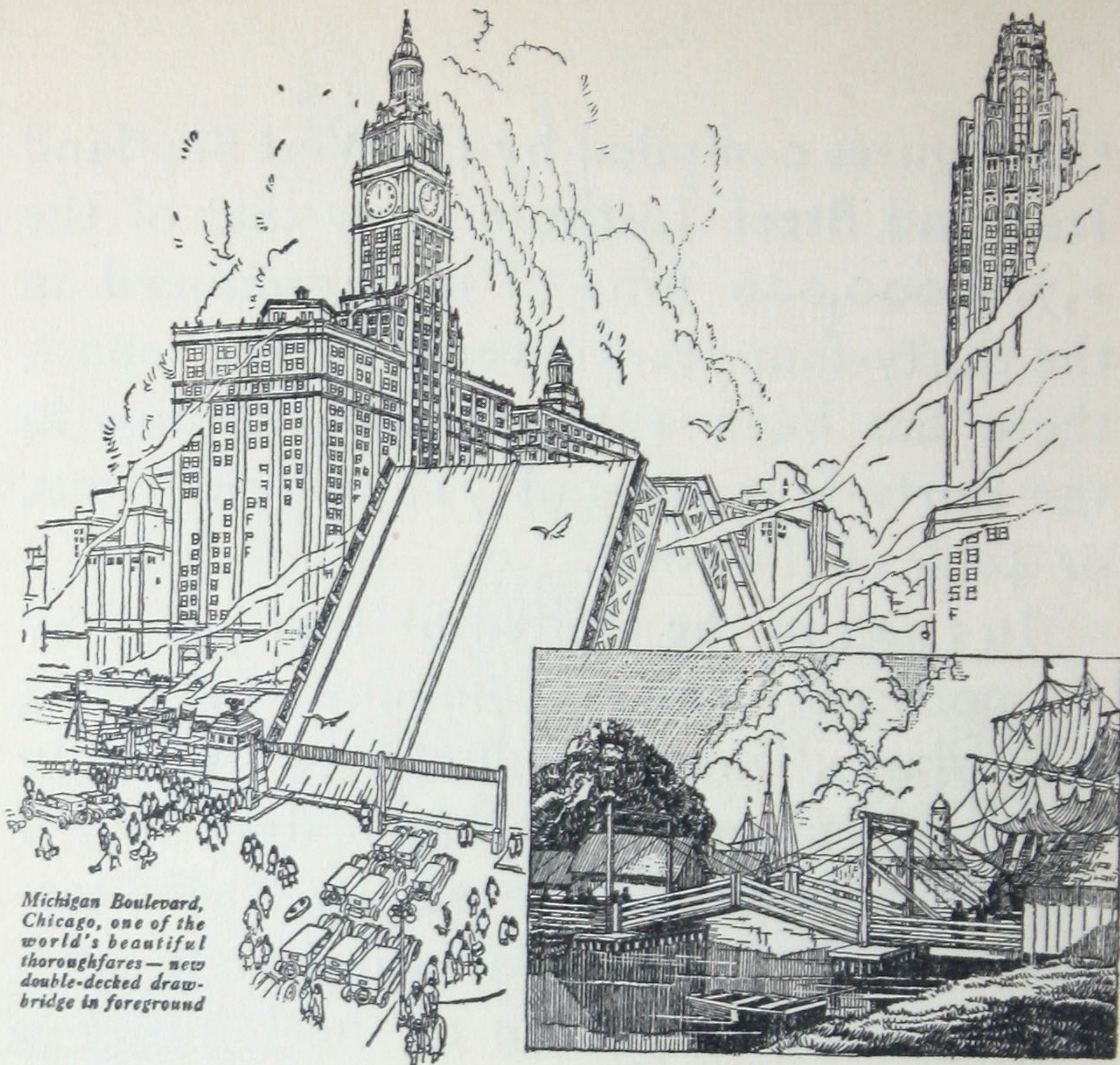
Buy your cement where you see this sign

that figures compiled by the West Scotland Iron and Steel Institute show that of the 1,766,000,000 tons of iron produced in the thirty-four years covered by the report, there has been a total corrosion loss in the thirty-four years of 718,000,000 tons, or 40% of the total.

In 1923 in the United States there were 90 portland cement companies operating 127 plants, which produced 549,508,000 sacks of cement. Approximately $2\frac{1}{2}\%$ of this was manufactured by the Marquette Cement Manufacturing Company. The remarkable growth of the industry is shown in the table giving the production of portland cement in five year periods.

<i>Year</i>	<i>Annual Production in Bbls.</i>
1888	250,000
1893	590,652
1898	3,692,284
1903	22,342,973
1908	51,072,612
1913	92,097,134
1918 (^{During} War Period) . .	71,081,663
1923	137,377,000

It may readily be conceived that an industry with over 36,000 employees and



Michigan Boulevard, Chicago, one of the world's beautiful thoroughfares—new double-decked draw-bridge in foreground

Old Dearborn Street Drawbridge, Chicago, 1834

CHICAGO—magic city of the central West—youngest metropolis in the world! In all the history of civic achievement, where is to be found its equal?

Starting with the cabin of Jean Baptiste Point de Saible about the time of the Revolution, reborn with the arrival of John Kinzie (1804), wiped out by the Fort Dearborn Massacre (1812) but quick to regain its feet—all but annihilated by the \$196,000,000 fire of 1871—host at the most remarkable Exposition in the history of the world (1893)—how truly in every way the "Garden City" has lived up to its motto: "I will!"

Today Chicago has just begun to grow. The "Chicago Plan" and the deep waterways project mean a development for this city and the Mississippi Valley that would tax the imagination of a Jules Verne to conceive. It is to the upbuilding of this great new "Empire" that we dedicate our efforts, as we enter upon the second quarter-century of our existence.

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**Marquette
CEMENT**

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an annual payroll in excess of \$60,500,000 is an important factor in the welfare of the nation, but the interdependence and correlation of the cement industry with other industries is not so apparent.

Last year the cement industry used 10,500,000 tons of coal (it requires 50 lbs. of coal to make one sack of cement), 4,700,000 gallons of fuel oil, and 4,000,000,000 cubic feet of gas, and contributed over 3% of all the freight loaded by the railroads. Over 30,000,000 pounds of cotton are required to make the annual replacement of sacks. In quarrying and mining operations over 16,000,000 lbs. of explosives are now used each year, and other products to the extent annually of over 40,000,000 lbs. of greases and oils, 2,000,000 linear feet of belting, 5,000,000 firebrick and 16,000,000 lbs. of paper, not to mention mechanical equipment and supplies, show how widespreading are the effects of Joseph Aspdin's discovery one hundred years ago.

Surely to participate in the manufacture or distribution of portland cement is a worthy contribution to our national development.

